

WHAT IS CLAIMED IS:

1. A method for applying a digital watermark to output images from a computer program, comprising:

generating, for each of the output images, the digital watermark, the digital watermark having at least one attribute, wherein each attribute is a function of a variable associated with the attribute, the variable being capable of modification from image to image to produce a different digital watermark on each of the output images; and

applying the digital watermark to each output image to produce corresponding watermarked images.

2. The method of claim 1, wherein the generating step comprises:

generating, for each of the output images, the digital watermark, wherein said at least one attribute of the digital watermark is a function of a random number.

3. The method of claim 1, wherein said generating step comprises:

retrieving, based on at least one variable, at least a portion of the digital watermark from a memory having a plurality of different watermark portions, wherein said at least one attribute is varied amongst said different watermark portions.

4. The method of claim 3, wherein said generating step further comprises:

modifying at least one further attribute of the watermark based on the associated variable.

5. The method of claim 4, wherein said generating step comprises:

generating, for each of the output images, the digital watermark, wherein said at least one attribute comprises font type, x-dimension size, y-dimension size, rotation, text spacing, line spacing, or opacity.

6. The method of claim 4, wherein said applying step comprises, for each output image:

selecting at least one position on each output image color channel at which to apply the digital watermark, wherein the selected position on each output image color channel can be varied from one application of the digital watermark to another application of the digital watermark to generate chromatic aberration; and

blending the digital watermark with said output image at said selected position to produce a watermarked output image.

7. The method of claim 6, wherein said applying step further comprises, for each output image, the following steps before said blending step:

transforming the digital watermark; and

modifying opacity of the digital watermark.

8. The method of claim 7, wherein said transforming, comprises:

transforming the digital watermark, wherein said transforming occurs across each color channel of the output image and can be varied from one application of the digital watermark to another application of the digital watermark.

9. The method of claim 7, wherein said modifying step comprises:

varying opacity of the watermark on a per-pixel basis based on brightness of corresponding pixels in the output image.

10. The method of claim 7, wherein said modifying step comprises:

varying opacity of the watermark based on detail in the output image.

11. The method of claim 7, further comprising:

limiting size of the output image to a specified value.

12. The method of claim 7, further comprising:
limiting per-pixel color resolution of the output image to a specified value.
13. The method of claim 9, wherein said transforming step, comprises:
scaling values in each color channel by a random amount on each pixel to generate chromatic noise.
14. The method of claim 6, wherein said blending step comprises:
perturbing each color channel of the digital watermark.
15. The method of claim 6, further comprising:
altering the applied digital watermark to create an embossed appearance.
16. The method of claim 15, wherein said altering step comprises:
performing a saturated add operation of the digital watermark for each output image such that the digital watermark is added to each of four channels of each output image; and
half-subtracting the digital watermark at a location represented by a specified value and such that only red, blue, and green channels of each output image are affected.
17. The method of claim 3, wherein said applying step comprises:
randomly applying the digital watermark to each output image.
18. The method of claim 3, wherein said applying step comprises:
applying the digital watermark to each output image, wherein the output image is a texture in a graphical scene.

means for enabling the processor to generate, for each of the output images, the digital watermark, wherein each attribute of the digital watermark is a function of a random number.

25. The computer program product of claim 23 wherein said first means comprises:

means for enabling the processor to generate, for each output image, the digital watermark, by retrieving at least a portion of the digital watermark from a memory having a plurality of different watermark portions, wherein said at least one attribute is varied amongst said different watermark portions.

26. The computer program product of claim 25, wherein said first means further comprises:

means for enabling the processor to modify at least one further attribute of the watermark based on the associated variable.

27. The computer program product of claim 26, wherein said first means comprises:

means for enabling the processor to generate, for each of the output images, the digital watermark, wherein said at least one attribute comprises font type, x-dimension size, y-dimension size, rotation, text spacing, line spacing, and/or opacity.

28. The computer program product of claim 26, wherein said second means comprises:

means for enabling the processor to apply the digital watermark to each output image by selecting at least one position on each output image color channel at which to apply the digital watermark, wherein the selected position on each output image color channel can be varied from one application of the digital watermark to another application of the digital watermark to generate chromatic aberration; and

blending the digital watermark with the output image at the selected position to produce a watermarked output image.

29. The computer program product of claim 28, wherein said second means further comprises:

means for enabling the processor to apply the digital watermark to each output image by

transforming the digital watermark; and

modifying opacity of the digital watermark.

30. The computer program product of claim 29, wherein said means for enabling the processor to apply the digital watermark to each output image comprises:

means for enabling the processor to transform the digital watermark, wherein said transforming occurs across each color channel of the output image and can be varied from one application of the digital watermark to another application of the digital watermark.

31. The computer program product of claim 29, wherein said means for enabling the processor to apply the digital watermark to each output image, further comprises:

means for enabling the processor to vary opacity of the watermark on a per-pixel basis based on brightness of corresponding pixels in the output image.

32. The computer program product of claim 29, wherein said means for enabling the processor to apply the digital watermark to each output image, further comprises:

means for enabling the processor to vary opacity of the watermark based on detail in the output image.

33. The computer program product of claim 29 wherein said means for enabling the processor to apply the digital watermark to each output image, further comprises:

means for enabling the processor to limit size of the output image to a specified value.

34. The computer program product of claim 29, wherein said means for enabling the processor to apply the digital watermark to each output image, further comprises:

means for enabling the processor to limit per-pixel color resolution of the output image to a specified value.

35. The computer program product of claim 29, wherein said second means comprises:

means for enabling the processor to apply the digital watermark to each output image by:

scaling values in each color channel by a random amount on each pixel to generate chromatic noise; and

modifying opacity of the digital watermark.

36. The computer program product of claim 23, wherein said second means further comprises:

means for enabling the processor to repeat the generation and application of the digital watermark a plurality of times for each output image.

37. The computer program product of claim 23, wherein said first means comprises:

means for enabling the processor to generate, for each output image, the digital watermark, by retrieving, based on said first variable, a plurality of different portions of the digital watermark from said memory, wherein said at least one attribute is varied amongst said plurality of different portions.

38. The computer program product of claim 25, wherein said second means comprises:

means for enabling the processor to randomly apply the digital watermark to each output image.

39. The computer program product of claim 25, wherein said second means comprises:

means for enabling the processor to apply the digital watermark to each output image, wherein the output image is a texture in a graphical scene.

40. The computer program product of claim 25, wherein said second means comprises:

means for enabling the processor to apply the digital watermark to each output image, wherein the output image is a rendered image.

41. The computer program product of claim 25, wherein said second means comprises:

means for enabling the processor to signal graphics hardware to apply the digital watermark to each output image to produce a watermarked image on a computer display screen.

42. The computer program product of claim 28, wherein said second means comprises:

means for enabling the processor to blend the digital watermark with each output image at the selected position to produce a watermarked output image by

perturbing each color channel of the digital watermark; and

performing a saturated add operation of the digital watermark to each output image.

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43. The computer program product of claim 28, further comprising:
third means for enabling the processor to alter the applied digital watermark to create an embossed appearance.

44. The computer program product of claim 43, wherein said third means comprises:

means for enabling the processor to alter the applied digital watermark to create an embossed appearance by

performing a saturated add operation of the digital watermark for each output image such that the digital watermark is added to each of the four channels of each output; and

half-subtracting the digital watermark at a location represented by a specified value and such that only red, blue, and green channels of said output image are affected.

45. A method for marketing a computer program, wherein the computer program produces output images, the method comprising:

producing a commercial version of the computer program, said commercial version of the computer program having a first output file format; and

producing a non-commercial version of the computer program, said non-commercial version having a second output file format that cannot be read by said commercial version of the computer program, and wherein the output images produced by said non-commercial version of the computer program are watermarked with a visible watermark.

46. The method of claim 45 further comprising:

disabling software plug-ins to said non-commercial version of the computer program.

47. The method of claim 45, further comprising:
preventing said non-commercial version of the computer program
from exporting data to other output file formats.

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